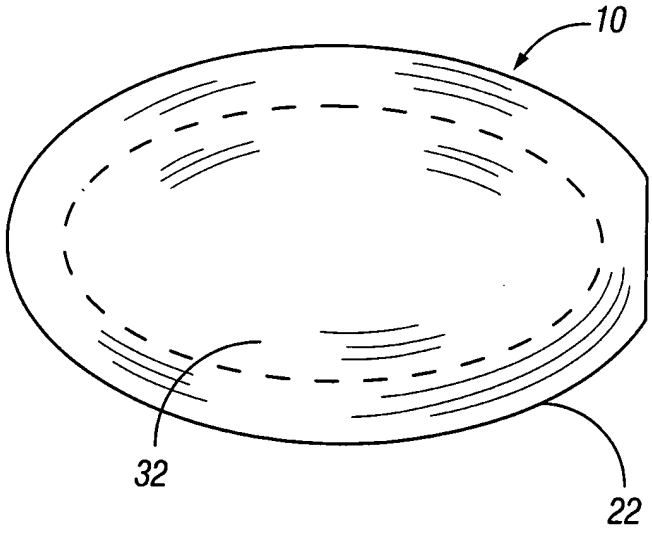

FIG.1

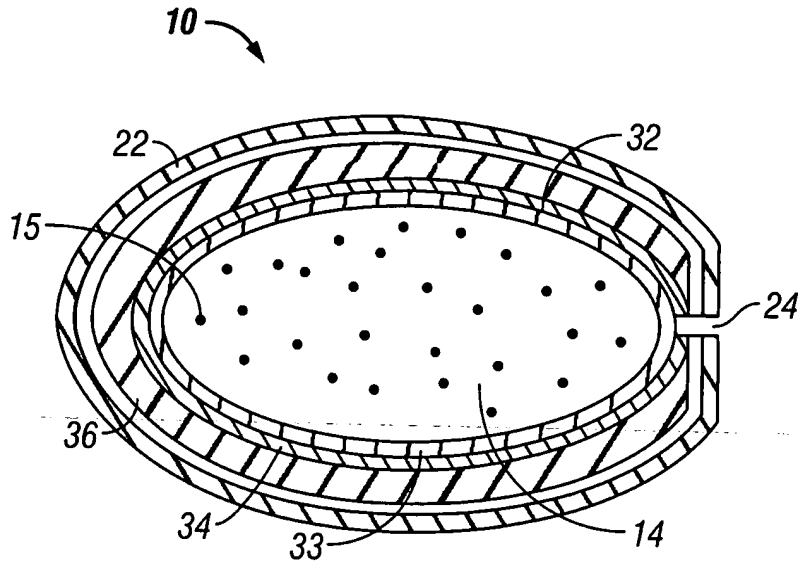

FIG.2

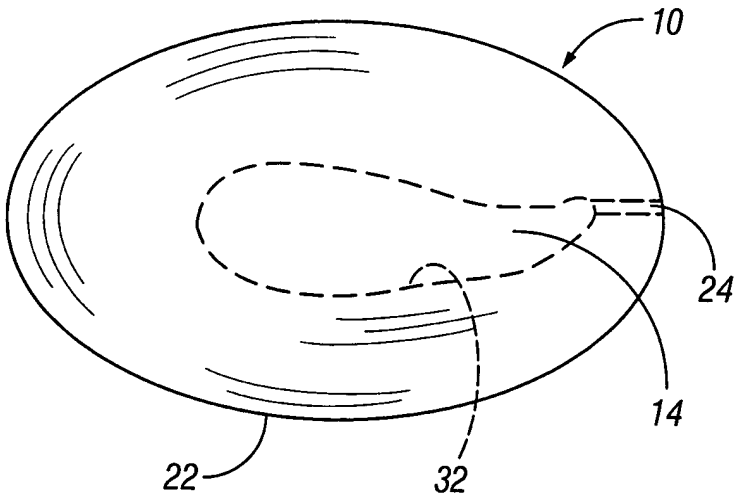

FIG. 3

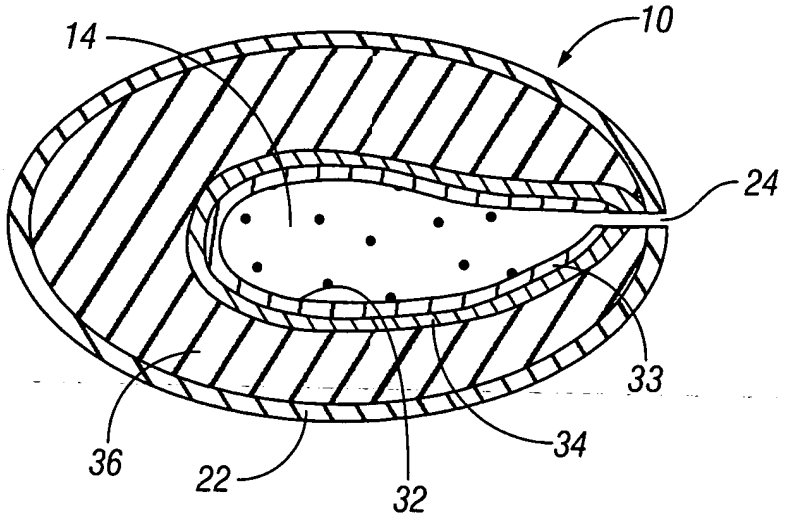

FIG. 4

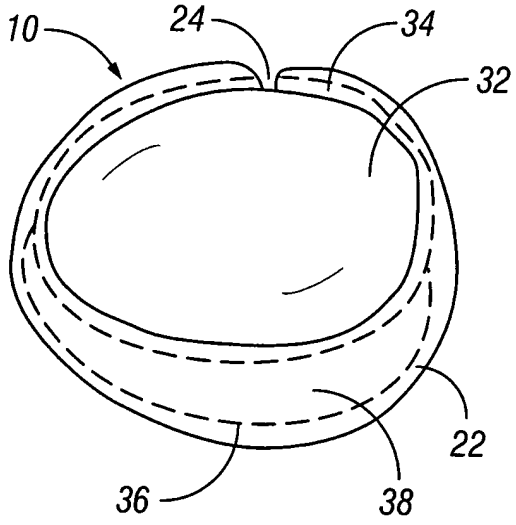

FIG. 5

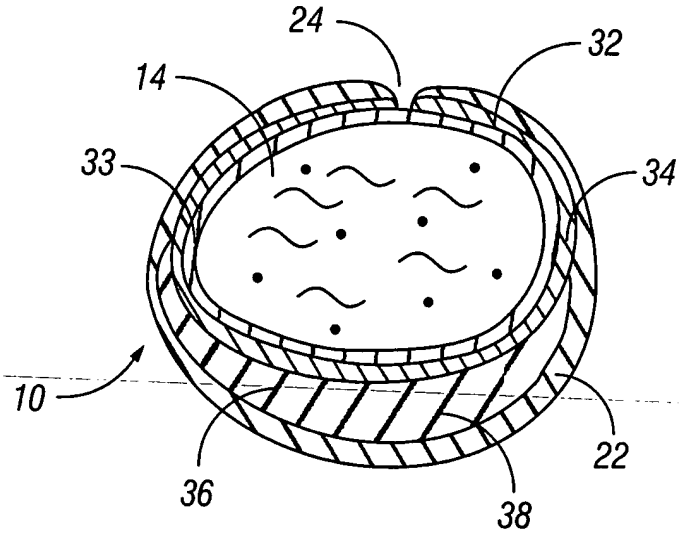

FIG. 6

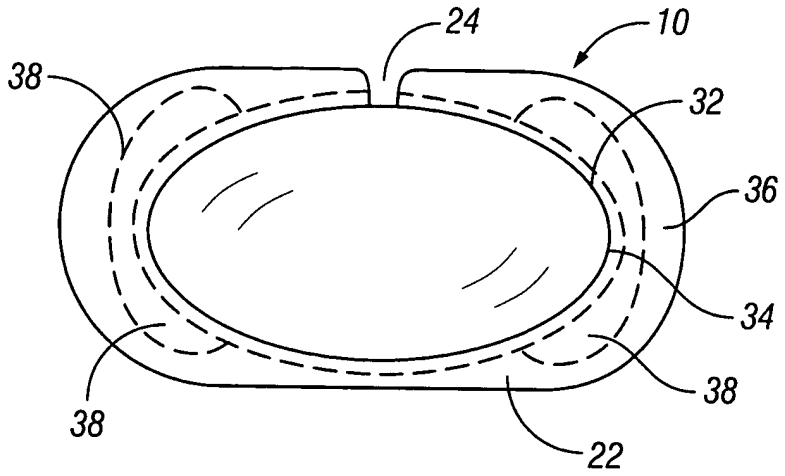

FIG. 7

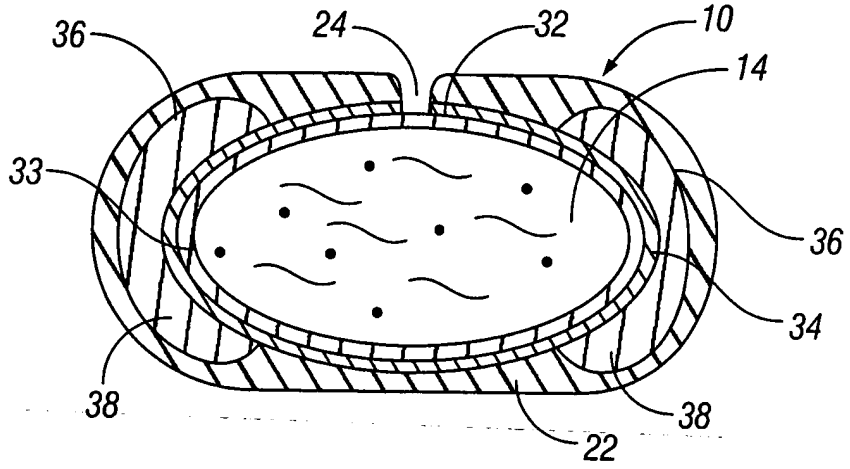

FIG. 8

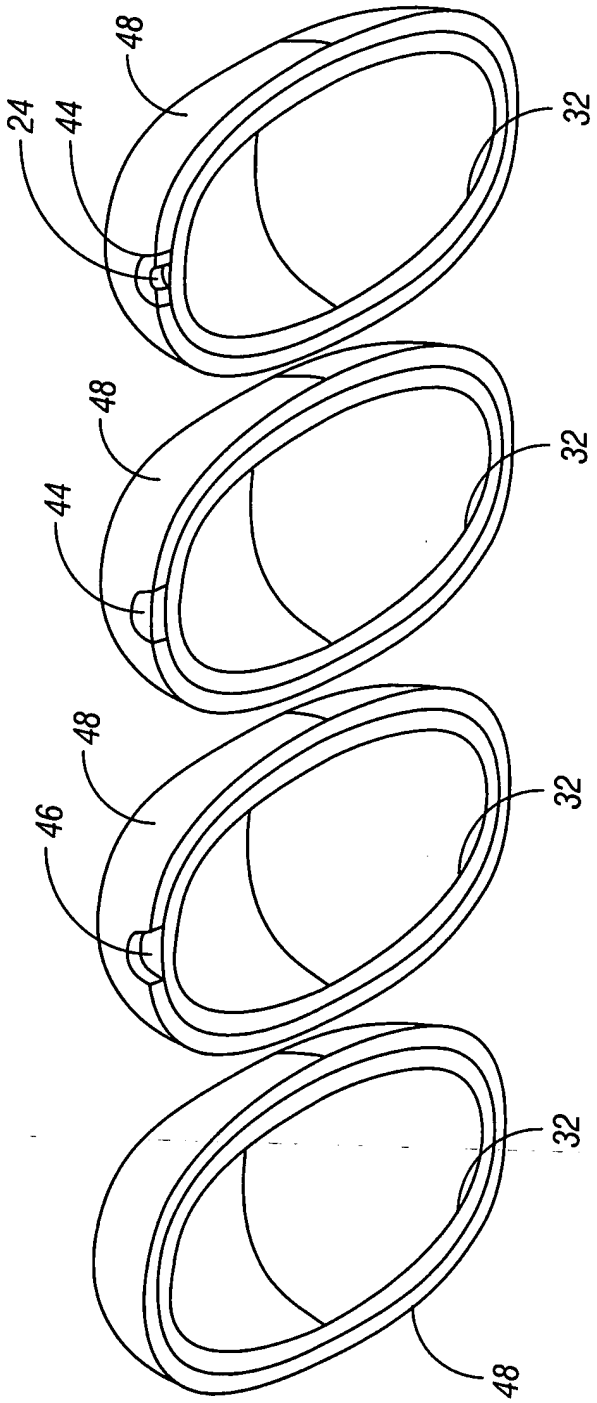

FIG. 9D

FIG. 9C

FIG. 9B

FIG. 9A

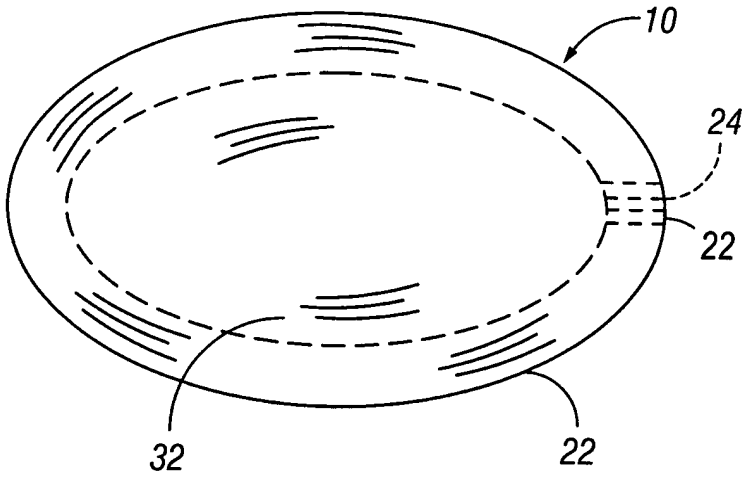

FIG. 10

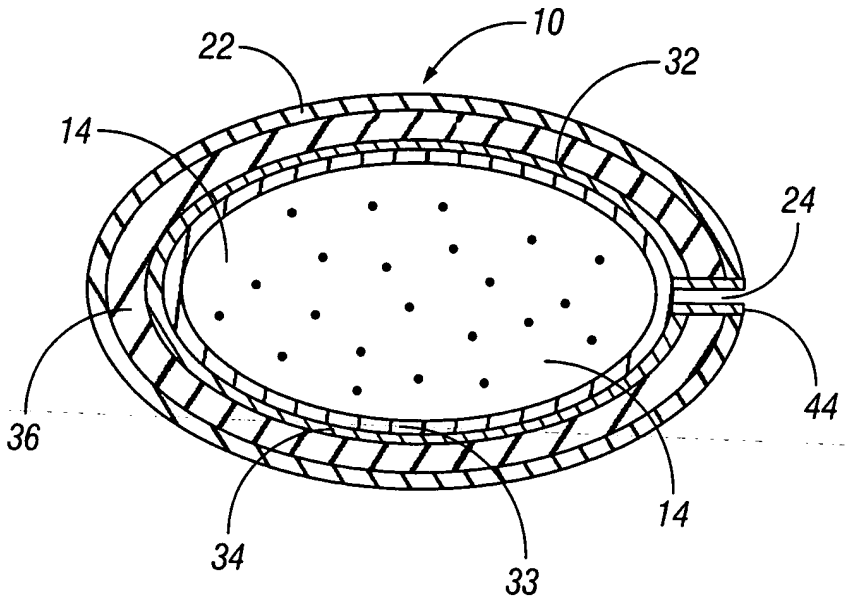

FIG. 11

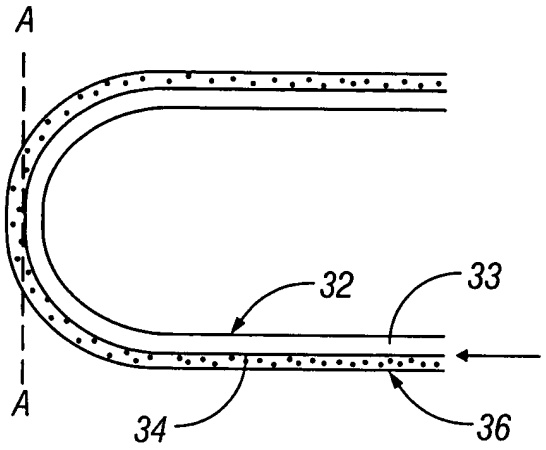

FIG. 12

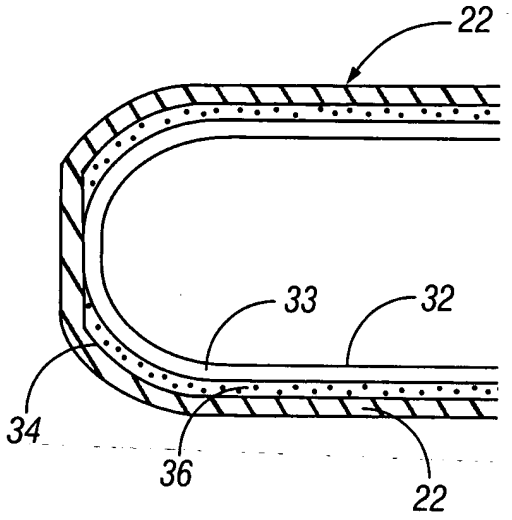

FIG. 13

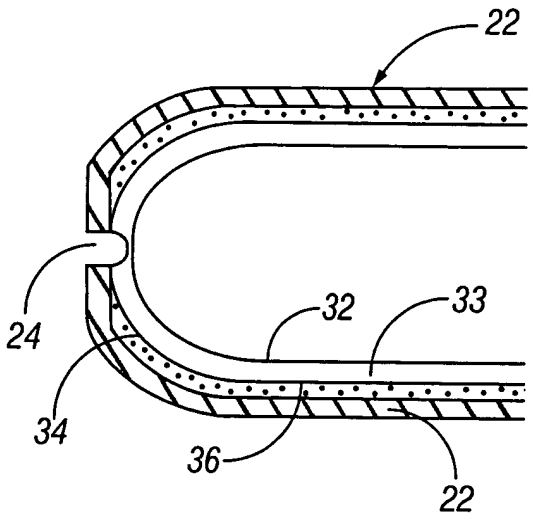

FIG. 14

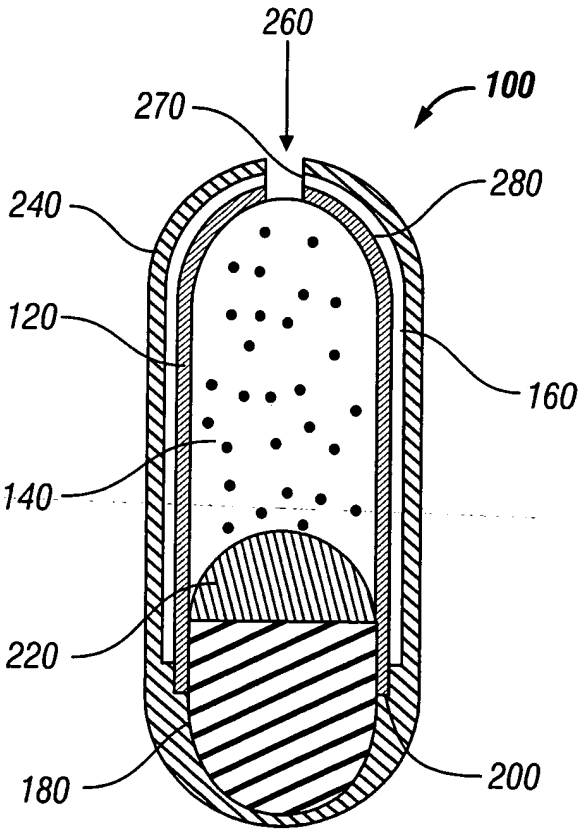

FIG. 15

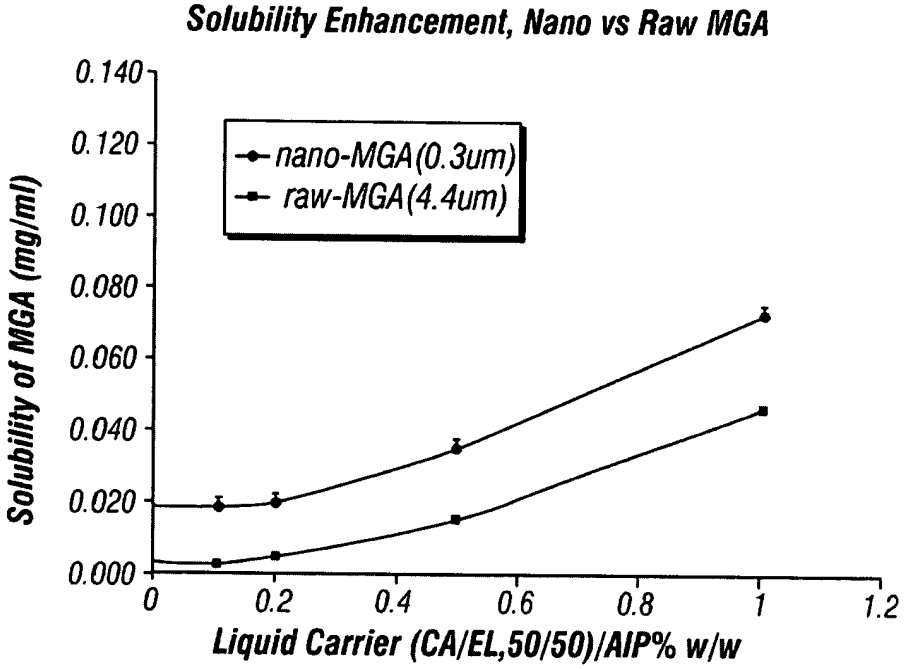
Solubility Enhancement, Nano vs Raw MGA
0.140
0.120
0.100
0.080
0.060
0.040
0.020
0.000
Solubility of MGA (mg/ml)
nano-MGA(0.3um)
raw-MGA(4.4um)
0
0.2
0.4
0.6
0.8
1
1.2
Liquid Carrier (CA/EL,50/50)/AIP% w/w

FIG. 16

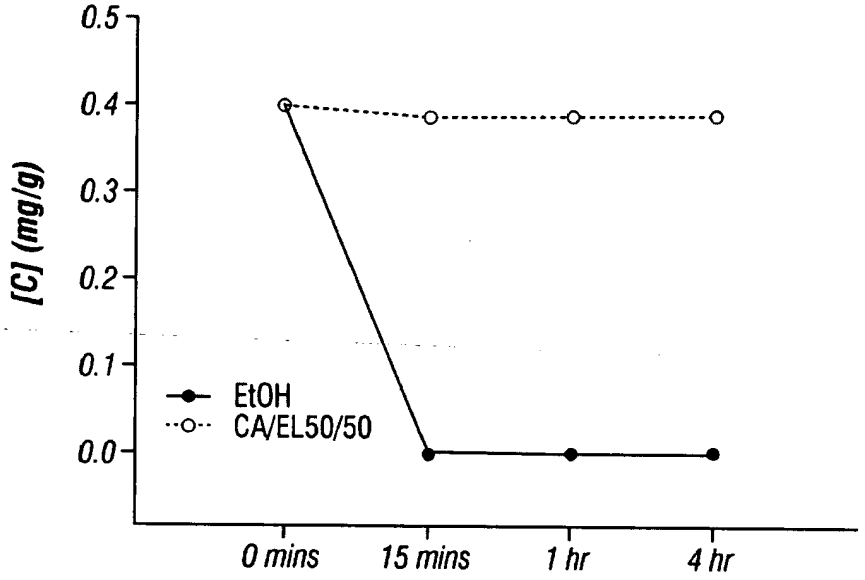
0.5
0.4
0.3
0.2
0.1
0.0
[C] (mg/g)
EtOH
CA/EL50/50
0 mins
15 mins
1 hr
4 hr

FIG. 17

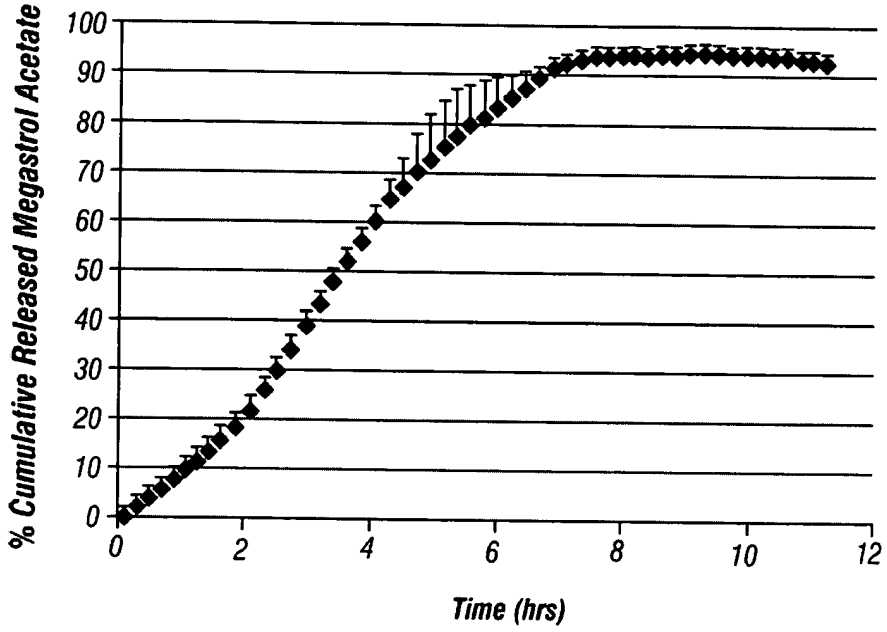
% Cumulative Released Megastrol Acetate
100
90
80
70
60
50
40
30
20
10
0
0
2
4
6
8
10
12
Time (hrs)

FIG. 18

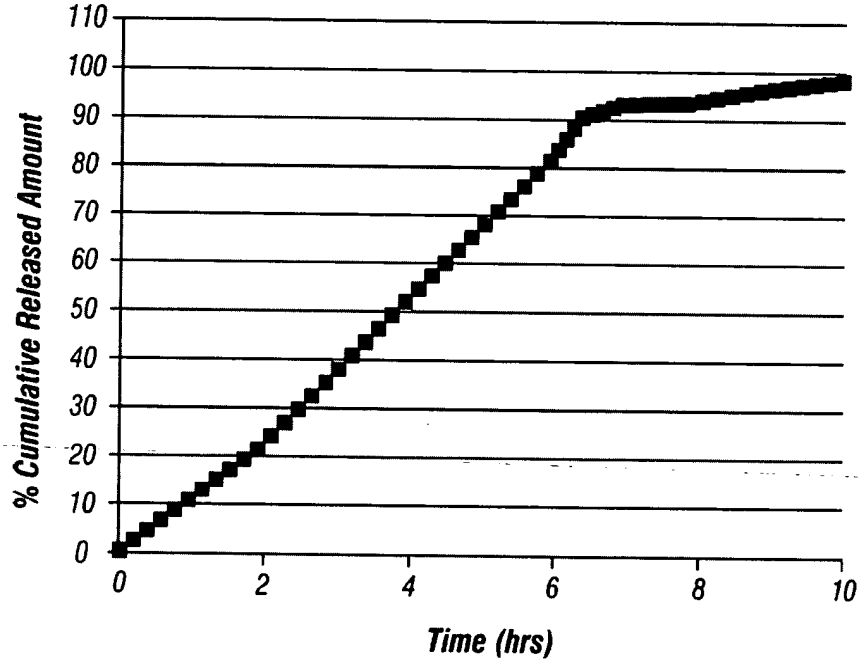
% Cumulative Released Amount
110
100
90
80
70
60
50
40
30
20
10
0
0
2
4
6
8
10
Time (hrs)

FIG. 19

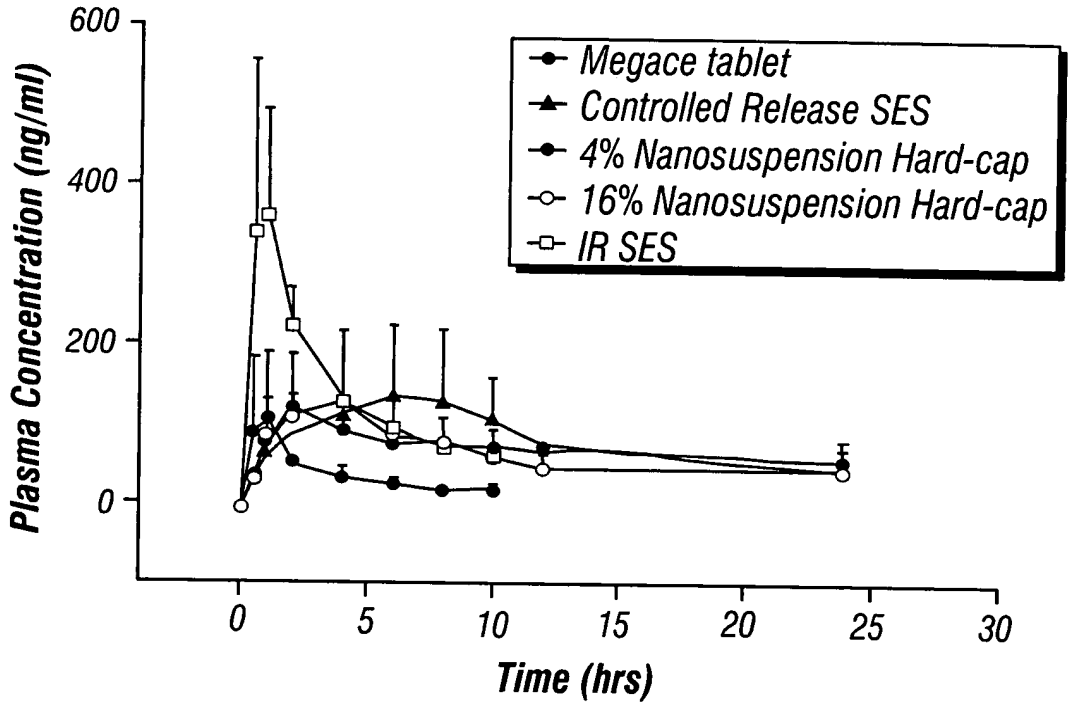
Plasma Concentration (ng/ml)
600
400
200
0
0
5
10
15
20
25
30
Time (hrs)
Megace tablet
Controlled Release SES
4% Nanosuspension Hard-cap
16% Nanosuspension Hard-cap
IR SES

FIG. 20

Physical Properties of Various Saturated Fatty Acids

Fatty Acid	Melting temperature (°C)	Solubility in water at 20°C (mg/g)
Caproic acid (C6)	-3.4	10.82
Caprylic acid (C8)	16.7	0.68
Capric acid (C10)	31.4	0.15
Lauric acid (C12)	44	Insoluble
Myristic acid (C14)	58.5	
Palmitic acid (C16)	63-64	Insoluble
Stearic acid (C18)	69-70	Very slightly soluble

FIG. 21

Composition of Dosage Megastrol Acetate Formulations of Dosage Forms Used in Multi-arm PK Study

	Formulation
Megace Tablet (20mg)	Unknown
IR SES (10mg) x2	MA/Pluronic F108/Capric Acid/Cremophor EL (1.77/0.83/48.7/487, wt%)
Controlled Release SES (10mg) x2	MA/Pluronic F108/Capric Acid/Cremophor EL (1.77/0.83/48.7/48.7, wt%)
4% Nanosuspension Hard-cap (20 mg)	MA/Pluronic F108/Capric Acid/Cremophor EL (3.8/1.4/47.4/47.4, wt%)
16% Nanosuspension Hard-cap (20 mg)	MA/Pluronic F108/Capric Acid/Cremophor EL (16.0/4.2/39.9/39.9, wt%)

FIG. 22

Plasma Sample Analysis (LC-MS) Conditions

HPLC Conditions	HPLC: Agilent 1100 (ID: LC-125) Column: MetaChem Polaris C18-A, 100x30mm, 3um. Guard Column: Metaguard Polaris C18-A,4.6mm, 3um. Flow Rate: 0.35ml/min. Injection Volume: 40ul. Mobile Phase: Isocratic 60/40 CH3CN/H2O, 0.2% Formic Acid.
MS Conditions	MS: PE Sciex API 300 LC/MA/MA with Analyst Ion Source: TurbolonSpray Scan Type: Positive MRM. Curtain Gas: Nitrogen, 9. Nebulizer Gas: Nitrogen, 9. Ionspray Voltage: 5.0 kV. Declustering Potential: 22V. Collision Gas: Nitrogen, 2. Collision Energy: 15V. MRM: m/z 385.2 to 325.2 for MA, 400ms. M/z 315.1 to m/z 109.0 for internal standard, 400ms.

FIG. 23